

CLIMATOLOGICAL DATA FOR JULY, 1911.

DISTRICT No. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

Apart from western Wyoming, where the temperature and rainfall were close to the normal, the month in the basin of the Colorado was unusually cool, as well as the wettest July in a great many years; in Arizona it was the wettest of record. The persistence and regular distribution of the rainfall in Arizona and New Mexico were remarkable, and, while heavy downpours occurred in localities, the resulting damage was many times offset by benefits; this was especially true of the desert regions of Arizona and western New Mexico, where, at the close of the month, all water holes were full, and a luxuriant growth of grass covered the ranges. The persistency of rain in southwestern Colorado caused swollen streams in the San Juan Basin, and much damage was done to ranch property, besides causing a complete failure of the first crop of alfalfa and a deterioration in the condition of other field crops. The heavy rains of the 17th and 18th, on the watershed of Lightner Creek, northwest of Durango, caused the stream to overflow its banks, destroying some crops and washing out the bed of the railroad. In the adjoining county of San Juan, in New Mexico, heavy downpours caused freshets that damaged culverts and irrigation ditches in La Plata, San Juan, and Animas Valleys. On the 14th and 20th the San Juan River at Bloomfield, N. Mex., was the highest in 35 years.

TEMPERATURE.

The mean of the 143 stations reporting was 72.3° , or 2.8° below the normal. The mean for July, 1910, was 75.4° . By subdivisions the means and departures were: Western Wyoming, 59.2° , $+0.4^{\circ}$; western Colorado, 61.8° , -3.1° ; eastern Utah, 70.1° , -1.6° ; western New Mexico, 70.9° , -2.5° ; Arizona, 79.0° , -3.1° ; and southeastern Nevada, 74.4° . The highest monthly mean was 93° at Parker, Ariz., and the lowest, 44.6° , at Corona, Colo. In the southern and central portions of the district the daily mean temperatures were below the normal nine-tenths of the month, and in the southwestern portion of Colorado there was only one day warmer than the normal. By subdivisions the extremes were: Western Wyoming, 88° at Eden and 27° at Daniel; western Colorado, 99° at Grand Valley and 26° at Fraser, Lay, and Pyramid; eastern Utah, 106° at Springdale and 24° at Seaford; western New Mexico, 101° at Deming and 40° at Aragon and Dulce; Arizona, 120° at Mohawk Summit and 28° at Flagstaff No. 2; southeastern Nevada, 104° and 43° at Caliente.

PRECIPITATION.

The average for the 194 stations reporting was 3.18 inches, or 1.40 inches above the normal, and 0.50 inch less than for August, 1909, the wettest summer month since the beginning of the records. The average for July, 1910, was 1.70 inches. The rainfall was unusually well distributed both geographically and throughout the

month, the last two days being the only days without rainfall over the greater part of the district. By watersheds the averages and departures were: Green, 1.03, ± 0.00 ; Grand, 3.13, $+1.20$; San Juan, 5.09, $+4.43$; Little Colorado, 3.68, $+2.10$; Gila, 3.74, $+1.65$; Mimbres, 5.08, $+2.98$; and Colorado, proper, 1.60, $+0.81$ inch. The greatest monthly amount was 8.58 inches at Chromo, Colo., and the least monthly amount, 0.03 inch, at San Rafael, Utah. Monthly amounts in excess of 4 inches were recorded at 22 stations in Colorado, 11 in New Mexico, and 31 in Arizona. Daily falls of 2 inches or more were noted at 2 stations in New Mexico and 18 stations in Arizona. By subdivisions the greatest and least monthly amounts were: Western Wyoming, 0.25 at Eden and 0.13 at Daniel; western Colorado, 8.58 at Chromo, and 0.84 at Grand Junction; eastern Utah, 3.95 at Monticello and 0.03 at San Rafael; western New Mexico, 7.13 at Deming and 2.46 at Lordsburg; and Arizona, 8.35 at Intake and 0.22 at Parker.

The average number of days with 0.01 inch or more precipitation was 4 in western Wyoming, 14 in western Colorado, 7 in eastern Utah, 12 in western New Mexico, 10 in Arizona, and 2 in southeastern Nevada; and for the district as a whole 11 days.

MISCELLANEOUS.

The sunshine was much below the average. Grand Junction reported 66, Durango 68, Flagstaff 55, Phoenix 74, and Yuma 85 per cent of the possible. In western Colorado the deficiency was about 11 per cent. In Arizona the deficiency ranged from 5 per cent at Yuma to 17 per cent at Flagstaff.

The relative humidity was unusually high for July in the central and southern parts of the district. Grand Junction reported 48, Durango 72, Flagstaff 73, Phoenix 53, and Yuma 51 per cent.

THE COLORADO RIVER.

The discharge of the Grand at Fruita was somewhat above the average of recent Julys; the highest stage, 9.2, was noted on the 7th, when the discharge was 23,200 second-feet. The lowest stage, 5.6 feet, occurred on the 31st. The discharge of the Green, which was not much affected by the rainfall, was somewhat below the average. The highest stage, 9.6 feet, occurred on the 1st, when the discharge was 20,100 second-feet. The San Juan carried an unusually large volume due to the heavy rainfall in southwestern Colorado and northwestern New Mexico. As a result of the downpours the river at Shiprock reached 13.2 feet on the 14th and 14.6 feet on the 20th, said to be the highest stages in 35 years. At Topock, on the trunk stream, the highest stage, 12 feet, occurred on the 1st, and the lowest, 6 feet, on the 17th-19th. At Yuma the average height was practically the same as the average for the last five years.

TABLE 1.—Climatological data for July, 1911. District No. 9, Colorado Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<i>Wyoming.</i>																					
Daniel.	Uinta.	6,740	12	56.6	+ 0.4	83	23†	27	1†	48	0.13	- 0.62	0.13	0	1	22	9	0	nw.	J. M. Van Dervort.	
Eden.	Sweetwater.	6,577	2	61.8	-	88	14†	30	9	53	0.25	-	0.08	0	7	18	13	0	w.	Eden Valley L. & I. Co.	
Green River.	do.	6,083	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Geo. W. Maxom.		
Merna.	Uinta.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	U. S. Forest Service.		
Pinedale.	Fremont.	6,167	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Do.		
Willow Creek Cabin.	do.	7,500	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Do.		
<i>Colorado.</i>																					
Ashcroft.	Pitkin.	9,483	9	51.8	- 3.3	73	15	32	31	37	4.29	+ 2.52	0.72	0	22	-	-	-	Dan McArthur.		
Bed Rock.	Montrose.	9,536	22	50.6	- 2.9	73	14	28	31	43	4.45	+ 2.22	1.42	0	13	0	19*	9	nw.	W. B. Weybright.	
Breckenridge.	Summit.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. J. G. Thompson.		
Buford.	Rio Blanco.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. H. Genier.		
Cascade.	San Juan.	8,900	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	San Juan W. & P. Co.		
Cedaredge.	Delta.	6,175	13	67.8	- 2.3	89	11	47	8	40	1.06	+ 0.28	0.42	0	8	6	17	7	sw.	Harry A. Cobbett.	
Chromo.	Archuleta.	7,500	5	60.2	-	82	9†	38	9†	44	8.58	-	1.90	0	19	8 ^a	15	7	sw.	Lawrence Nolan.	
Cochetopa.	Saguache.	9,088	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Miss Bessie McDonough.		
Colbran.	Mesa.	6,000	18	65.8	- 3.0	88	11	43	9	38	1.93	+ 0.81	0.78	0	8	9	17	5	sw.	A. A. Wood.	
Columbine.	Routt.	8,766	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. M. A. Caron.		
Columbine Ranch.	Delta.	6,925	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Geo. W. Wade.		
Corona.	Grand.	11,660	4	44.6	-	60	10	30	2†	26	4.46	-	0.98	0	15	8	23	0	sw.	U. S. Weather Bureau.	
Cortez.	Montezuma.	6,100	12	68.8	-	95 ^b	12	45 ^b	31	41	4.04	-	1.53	0	8	8 ^b	5 ^b	16 ^b	s.	Wm. C. Syrett.	
Craig.	Routt.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Joseph F. Haubrich.		
Crawford (near).	Montrose.	6,600	1	64.4	-	85	11	45	9	35	2.47	-	0.86	0	12	15	8	8	-	C. W. Roe.	
Crested Butte.	Gunnison.	8,867	1	54.5	-	79	11	30	31	46	5.32	-	1.03	0	15	4	17	10	-	Charles L. Ross.	
Delta.	Delta.	4,965	21	71.4	- 2.9	98	11	45	10†	51	1.53	+ 0.70	0.49	0	7	13	10	8	-	E. M. Getts.	
Dillon.	Summit.	8,800	1	52.7	-	75	14	28	31	43	3.23	-	0.80	0	7	14	13	4	n.	Harry T. Hamilton.	
Durango.	La Plata.	6,534	16	64.7	- 4.0	87	10	46	31	37	5.21	+ 3.66	0.92	0	20	9	17	5	nw.	U. S. Weather Bureau.	
Eureka.	San Juan.	10,000	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	San Juan W. & P. Co.		
Fraser.	Grand.	8,560	2	51.4	-	75	12	26	10	47	3.33	-	1.04	0	13	0	12	19	n.	L. D. C. Gaskill.	
Fruitland.	Mesa.	4,510	12	72.9	- 2.3	98	11	38	9	54	1.37	+ 0.53	1.31	-	0	3	7	17	7	-	J. B. Willsea.
Gladstone.	San Juan.	10,400	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	San Juan W. & P. Co.		
Glenwood Springs (near).	Garfield.	5,823	13	64.8	- 3.0	91	17	36	31	49	2.93	+ 1.82	0.85	0	9	21	5	5	w.	E. A. O'Neil.	
Grand Junction.	Mesa.	4,608	20	74.8	- 4.4	96	10	54	9	36	0.84	+ 0.34	0.40	0	7	10	14	7	se.	U. S. Weather Bureau.	
Grand Lake.	Grand.	8,153	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. Belle Kauffman.		
Grand Valley.	Garfield.	5,089	19	70.2	- 2.6	99	11	39	8†	55	1.69	+ 0.80	0.63	0	9	5	20	6	-	David Evans.	
Gunnison.	Gunnison.	7,670	18	60.6	- 0.6	87	11	35	5	46	4.21	+ 3.02	0.68	0	18	11	17	3	-	Clarence Adams.	
Horsefly.	Montrose.	8,700	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Lawrence J. Finch.		
Ironton.	Ouray.	10,000	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P. H. Foley.		
Lake City.	Hinsdale.	8,688	6	58.1	-	79	10	40	4†	36	3.01	-	0.41	0	26	1	26	4	ne.	J. F. Maurer.	
Lay.	Routt.	6,190	17	63.2	- 3.6	90	12	26	9	50	1.41	+ 0.53	0.47	0	11	9	12	10	sw.	A. G. Wallihan.	
Mancos.	Montezuma.	6,960	12	63.0	- 3.4	83	9†	43	31	37	5.39	+ 4.08	1.34	0	18	8	20	6	w.	B. M. Krumanitzky.	
Marble.	Gunnison.	7,951	2	57.4	-	81	11	33	9	41	4.14	-	0.99	0	15	12	10	9	ne.	F. E. Morse.	
Marshall Pass.	Saguache.	10,846	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Wm. D. Lillard.		
Meeker (near).	Rio Blanco.	6,182	19	61.2	- 4.2	87	20	31	9	47	0.97	-	0.59	0	18	7	11	13	7	-	T. Baker.
Montrose.	Montrose.	5,511	22	68.4	- 1.4	92	15	47	9	41	2.10	+ 1.32	0.60	0	14	11	11	9	-	U. S. Reclamation Service.	
Nast.	Pitkin.	7,953	1	54.8	-	76	10†	28	29	32	4.22	-	0.67	0	10	10	18	5	w.	Arthur Hanthorn.	
Pagoda.	Routt.	6,500	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. J. W. Scott.		
Pagosa Springs.	Archuleta.	7,108	4	61.5	-	84	9	36	31	45	5.84	-	1.50	0	22	5	16	10	sw.	E. T. Walker.	
Palisades.	Mesa.	4,729	-	75.0	-	96	10	56	9	36	1.26	-	0.98	0	4	13	11	7	sw.	G. S. Herbolzheimer.	
Paonia.	Delta.	5,694	16	67.9	- 5.1	90	11	48	9	38	1.51	+ 0.57	0.48	0	8	2	26	3	sw.	J. M. Underwood.	
Parshall.	Grand.	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F. A. Field.		
Pitkin.	Gunnison.	9,500	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. Maggie Camman.		
Pyramid.	Rio Blanca.	-	-	59.4	-	89 ^b	9	26 ^b	9	60 ^b	0.86	-	0.30	0	10	10	18	3	w.	E. E. Egry.	
Rangely.	do.	5,050	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Mrs. C. P. Hill.		
Redcliff.	Eagle.	-	-	8,695	18	-	-	-	-	-	-	-	-	-	-	-	-	-	Dorothea Greiner.		
Rico.	Dolores.	8,824	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Clinton B. Smith.		
River Portal.	Montrose.	6,570	5	65.4	-	89	10†	42	9	45	2.55	-	0.45	0	14	9	4	18	-	U. S. Reclamation Service.	
Sapinero (near).	Gunnison.	8,125	8	57.0	-	77	10	35	31	38	2.71	-	0.55	0	13	13	12	6	w.	W. F. Irving.	
Shoshone.	Garfield.	6,110	1	68.8	-	95	14	49	9	39	1.86	-	0.62	0	15	6	9	16	-	Central Colorado Power Co.	
Silvertown (near).	San Juan.	9,400	4	52.9	-	78	28	29	3	42	4.83	-	1.30	0	21	5	17	7	sw.	San Juan W. & P. Co.	
Spruce Lodge.	Grand.	9,600	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H. J. Wills.		
Steamboat Springs.	Routt.	6,683	8	59.4	-	88	12	27	9	53	2.12	-	0.65	0	7	25	2	4	-	M. Elliot Houston.	
Tacoma.	La Plata.	7,300	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	San Juan W. & P. Co.		
Telluride.	San Miguel.	-	-	57.0	-	79	10	33	30	44	5.90	-	1.23	0	26	7	11	13	ne.	John T. March.	
Terminal Dam.	La Plata.	8,300	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	San Juan W. & P. Co.		
Terrill's Ranch.	Mesa.	7,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A. F. Terrill.		
Uncompahgre Plateau.	Montrose.	8,400	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Martin Esser.		
Yampa (near).	Routt.	8,000	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Percy A. Hughes.		
<i>Utah.</i>																					
Aneth.	San Juan.	4,800	8	74.4	-	96	9†	53	4	38	2.40	-	0.55	0	8	16	13	2	-	H. R. Antes.	
Bluff.	do.	76.6	100	57	57	54	42	21	1	40	2.21	-	1.10	0	9	2	5	4	e.	G. D. James.	
Castle Dale.	Emery.	5,5																			

TABLE 1.—Climatological data for July, 1911. District No. 9—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Greatest in 24 hours.	Departure from the normal.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Utah—Continued.</i>																				
Orderville.	Kane.	6,660	1								1.34		0.40	0	8	5			F. A. Porter.	
Pine Valley.	Washington.	6,000									2.16		1.10	0	5				Mason Gardner.	
Price.	Carbon.	5,557	69.6	93	11†	46	1	41	1.32		0.56	0	4	25	1	5		R. H. Thompson.		
Ranch.	Kane.	6,700	9	62.6	87	10†	38	4	42	0.90		0.18	0	9	21	8		J. W. Seaman.		
San Rafael.	Emery.									0.03		0.02	0	2	11	7	13	W. C. Foy.		
St. George.	Washington.	2,880	21	80.8	-1.4	104	4†	52	3	47	2.01	+ 1.04	1.22	0	5	13	13	A. B. Ballantyne.		
Scofield.	Carbon.	7,625	1	57.9	86	13	24	9	57	1.31		0.41	0	11	17	6	8	B. Newren.		
Springdale.	Washington.	3,500	3	81.3	106	10	60	4†	40	1.31		0.57	0	5	17	2	12	Hattie Flanigan.		
Sunnyside.	Carbon.	5,280	6									0.50	0	9				Henry Cullum.		
Teasdale.	Wayne.	7,000	3	64.5	85	16	46	2†	31	0.71		0.20	0	8	9	1	21	Josiah Shurtz.		
Thompson.	Grand.	5,150		74.6	96	16	53	2†	41	0.94		0.24	0	6	18	4	sw.	A. J. Starmont.		
Tropic.	Garfield.	7,000	13	67.2	± 0.0	90	9†	45	4†	37	1.73	+ 0.84	0.72	0	5	3	25	E. P. Bolton.		
Trout Creek Ranger.	Uinta.	9,200	1								1.87		0.45	0	13	9	18	4	Forest Supervisor.	
Vernal.	do.	5,050	15	68.6	-3.1	95	12	36	9	50	0.28	- 0.46	0.16	0	5	23	8	0	S. P. Trim.	
Woodside.	Emery.	4,645		74.2	100	11	44	9	53	0.70		0.48	0	4	20	0	11	s.	D. P. Adams.	
<i>New Mexico.</i>																				
Alma.	Socorro.	5,500	15	73.6	-0.9	97	31	51	31	46	3.50	+ 1.08	0.70	0	12	2	19	10	sw.	M. A. Balke.
Aragon.	do.	5,856	4	61.8	87	30†	40	24†	47	3.70		0.70	0	10	6	22	3		John R. Milligan.	
Aztec.	San Juan.	5,590	11								4.22	+ 3.19	0.83	0	12	7	15	9	e.	Dr. T. J. West.
Blackrock.	McKinley.	6,500	3															r.	R. J. Bauman.	
Bloomfield.	San Juan.	5,500	16	72.4	-2.3	99	9	49	31	46	4.01	+ 3.02	0.88	0	14	5	21	5	se.	Fred LeClere.
Cambray.	Luna.	4,215	12								3.80	+ 2.34	1.10	0	11	5	18	8	w.	Agent Southern Pacific R. R.
Cliff.	Grant.	4,470	12																W. C. Beldin.	
Columbus.	Luna.	4,084	2																Agent E. P. & S. W. R. R.	
Deming.	do.	4,333	34	76.7	98	31	60	25			5.19		1.68	0	11	9	11	11	se.	Agent Southern Pacific R. R.
Dulce.	Rio Arriba.	6,756	4	65.4	-0.3	87	10	40	31	43	5.64	+ 2.88	1.53	0	21	4	13	14	sw.	G. H. Blakeslee.
Fort Bayard.	Grant.	6,152	36	70.7	-2.0	90	5	54	25†	35	4.59	+ 1.55	1.74	0	15	10	11	10	nw.	U. S. General Hospital.
Fort Wingate.	McKinley.	6,997	47																Cyril J. Collyer.	
Fruitland.	San Juan.	4,800	18	71.2	-3.5	92	9†	52	9†	40	4.50	+ 3.66	1.30	0	14	10	18	3	se.	Agent Southern Pacific R. R.
Gage.	Luna.	4,486	4																U. S. Forest Service.	
Gila Planting Station.	Grant.	6,475		67.9	87	31	52	22	30		3.63		1.76	0	11	8	17	6	se.	Agent E. P. & S. W. R. R.
Hachita.	do.	4,504	2																Agent E. P. & S. W. R. R.	
Haynes.	Rio Arriba.	6,600	1	72.6		91	11	60	4†	26	5.64		1.42	0	10	21	9	1	nw.	Dr. John R. Haynes.
Hermanes.	Luna.	4,451	2																Agent E. P. & S. W. R. R.	
Lordsburg.	Grant.	4,245	11	76.8	-6.0	100	30†	59	25	36	2.46	+ 0.69	0.93	0	9	4	20	7	sw.	Agent Southern Pacific R. R.
Luna.	Socorro.	7,300	6																G. B. Martin.	
Mimbres.	Grant.	5,007	6																Charles Dennis.	
Pinos Altos.	do.	8,000																	O. L. Scott.	
Pratt.	do.	4,415	2																Agent E. P. & S. W. R. R.	
Putnam.	San Juan.	6,200																	Robert H. Woods.	
Redrock.	Grant.	4,150	6																Agent E. P. & S. W. R. R.	
Rodeo.	do.	4,118	2																	
<i>Arizona.</i>																				
Allaires Ranch.	Cochise.	4,184	15								2.13	- 0.46	0.69	0	8	7	19	5	w.	Thomas Allaire.
Alpine.	Apache.	7,500																	U. S. Forest Service.	
Aztec.	Yuma.	492	12	92.6	-2.7	115	30†	72	17	42	0.95	+ 0.73	0.34	0	5	19	4	8	w.	Agent Southern Pacific Co.
Benson.	Cochise.	3,523	31	77.4	-7.7	100	31	60	1†	38	3.80	+ 1.75	0.80	0	17	9	13	9	e.	Do.
Bisbee.	do.	5,500	21	71.5	-3.8	90	30†	56	2†	25	2.38	+ 1.16	0.64	0	12	9	6	16	e.	Rev. G. J. Pritchard.
Bowie.	do.	3,756	35	76.0	-4.0	104	31	50	10	46	1.27	- 0.43	0.83	0	3	5	19	7	sw.	Agent Southern Pacific Co.
Buckeye.	Maricopa.	980	20	88.4	+ 1.0	113	31	66	2	43	3.73	+ 2.50	2.00	0	6	22	7	2	sw.	H. E. Kell.
Canal.	Santa Cruz.	5,225	2																se.	R. A. Rodgers.
Casa Grande.	Pinal.	1,396	29	90.2	-2.9	111	27†	63	21	45	1.30	+ 0.54	1.30	0	1	11	2	8	sw.	Agent Southern Pacific Co.
Casa Grande Ruins.	do.	1,422	3	86.8	110	31	66	31	44	3.23		1.33	0	10	8	7	16	w.	F. Pinkley.	
Cavecreek.	Maricopa.	1,520	4	82.2	106	13†	62	2†	44	6.24		2.00	0	11	10	19	2		E. A. Howard.	
Chin Lee.	Apache.	6,090	3	70.8	91	31	51	4†	35	3.59		0.72	0	15	5	5	21	u.	Fr. L. Ostermann, O. F. M.	
Charlors Mill.	Graham.	8,000	5	62.7	79	30	50	24	25	5.78		1.30	0	11	7	18	6	sw.	H. R. Charlson.	
Clifton.	Greenlee.	3,584	21	81.9	103	30†	64	25	32	4.19	+ 2.33	1.05	0	14	7	20	4	sw.	P. Reisinger.	
Cline.	Gila.	2,300	11	80.5	-3.9	100	15†	61	31	39	5.07	+ 3.18	2.00	0	10	5	19	7	sw.	W. M. Clanton.
Cochise.	do.	4,219	13	77.2	-4.2	101	31	55	3	39	2.21	+ 0.16	0.85	0	6	19	0	12	sw.	Agent Southern Pacific Co.
Columbia.	Yavapai.	1,900	9	84.9	112	11	59	6	46	3.76		1.00	0	9	7	3	17	se.	M. J. Nolan.	
Courtland.	Cochise.	4,543	2																Agent E. P. & S. W. Co.	
Dos Cabezos.	do.	5,250	3	75.8	101	5	49	2	45	4.53		1.20	0	9	12	13	6	w.	N. Erickson.	
Douglas.	do.	3,930	8	77.6	103	30†	54	1	44	2.90		0.48	0	19	8	12	5	sw.	Dr. F. T. Wright.	
Dudleyville.	Pinal.	2,204	20	79.2	+ 1.4	100	31	64	1†	36	2.19	+ 0.69	0.84	0	14	4	22	5	sw.	G. F. Cook.
Fairbank.	Cochise.	3,862	3																Agent E. P. & S. W. Co.	
Flagstaff (1).	Coconino.	6,907	19	62.6	-2.4	84	9	44	5	37	5.53	+ 3.74	1.08	0	19	6	11	14	nw.	U. S. Weather Bureau.
Flagstaff (2).	do.	7,500	1	59.7		83	9	28	4†	50	5.44	+ 1.06	1.66	0	18	3	11	17	sw.	C. C. Moers.
Florence.	Pinal.	1,504	12	76.6	-11.7	110	31	49	1	48	2.54	+ 1.06	1.02	0	8	7	22	2	sw.	U. S. Forest Service.
Fort Apache.	Navajo.	5,200	39	70.4	-3.6	92	19	45	4	43	4.88	+ 1.89	0.51	0	19	10	15	6	sw.	Agent Ariz. Eastern R.R. Co.
Fort Huachuca.	Cochise.	5,100	26	75.1	+ 2.1	99	30†	56	2	37	2.15	- 1.43	1.10	0	4	13	0	18	se.	Post Surgeon, U. S. Army.
Gilabend.	Maricopa.	737	21	91.0	-3.0	117	6†	70	2†	40	2.27	+ 1.49	1.46	0	5	20	1	10	w.	Agent Southern Pacific Co.
Globe.	Gila.	3,825	10	78.8	-3.7	100	13†	62	3†	35	4.78	+ 2.32	2.09	0	10	4	20	7	sw.	B. G. Fox, M. D.
Grand Canyon.	Coconino.	6,866	6	63.3	55	8														

TABLE 1.—*Climatological data for July, 1911. District No. 9—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.	Prevailing wind direction.	Observers.					
				Mean.	Departure from the normal.			Total.	Greatest in 24 hours.	Number of rainy days 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of overcast days.						
					Highest.	Date.	Lowest.												
Arizona—Continued.																			
Natural Bridge.....	Gila.....	4,990	22					6.83	+ 4.33	2.00	0	13	5	10	16	sw.	D. G. Goodfellow.		
Oracle.....	Pinal.....	4,500	18						2.88	1.14	0	9	6	17	8	w.	W. H. Winters.		
Osborn.....	Cochise.....	4,676	2						5.56	2.08	0	6	0	23	8	sw.	Agent E. P. & S. W. Co.		
Paradise.....	do.....	5,436	5	68.9	92	31	49	28	40	5.56	0	2	24	6	1	sw.	J. C. Hancock.		
Parker.....	Yuma.....	345	17	93.0	- 0.9	118	15	70	1	42	- 0.15	0	12	6	0	25		M. A. Israel, M. D.	
Payson.....	Gila.....	5,550	3	69.8	90	31	50	31	40	4.83	0	2	9	19	3	e.	M. McDonald.		
Phoenix.....	Maricopa.....	1,108	16	86.0	- 4.4	109	31	65	2	36	6.47	+ 5.40	4.98	0	7	13	12	6	U. S. Weather Bureau.
Phoenix ¹	do.....	1,092	20	85.5	- 7.7	110	31	64	2	45	6.13	+ 4.91	3.80	0	6	16	9	6	G. Acuff.
Phoenix ²	do.....	1,189	2	86.6	110	30	67	17	38	5.26	- 2.10	0	6	0	10	14	7	10	Horne & Armstrong.
Pinal Ranch.....	Pinal.....	4,520	17						5.34	+ 2.63	1.49	0	10	14	7	10		Irion & Craig.	
Pinto.....	Apache.....	5,660	7						2.82	0.52	0	9	13	17	1	sw.	Mrs. C. F. Henning.		
Prescott.....	Yavapai.....	5,320	44	69.6	- 3.9	95	6	51	23	43	3.76	+ 0.86	1.02	0	11	8	9	14	J. W. Flynn, M. D.
Quartzsite.....	Yuma.....	800	3	91.8	115	31	69	23	45	2.09	0	1.00	0	6	15	13	3	sw.	
Redrock.....	Pinal.....	1,864	3	87.7	110	14†	64	1	40	0.73	0	0.25	0	5	5	26	0.	W. E. Scott.	
Roosevelt.....	Gila.....	2,175	7	85.0	104	31	67	22	31	5.18	0	1.76	0	10	7	17	7	W. J. Crowell.	
Sacaton.....	Pinal.....	1,280	4	86.0	109	14†	57	2	42	4.11	0	1.40	0	9	13	13	5	U. S. Reclamation Service.	
St. Johns.....	Apache.....	5,650	8	70.4	94	16	49	5	41	3.32	0	1.20	0	10	7	19	5	E. W. Hudson.	
St. Michaels.....	do.....	6,950	24	66.8	- 2.4	93	29	46	31	43	4.17	+ 2.10	1.40	0	16	4	18	9	A. Shreeve.
Salome.....	Yuma.....	1,875	4	82.8	107	31	56	16	49	1.39	0	0.47	0	7	8	18	5	Rev. A. Weber, O. F. M.	
San Carlos.....	Gila.....	2,456	29	80.6	- 5.5	108	30	57	17†	51	2.99	- 1.35	1.23	0	5	3	24	Mrs. M. B. Swartz.	
San Simon.....	Cochise.....	3,609	27															F. S. Thomas.	
Seligman.....	Yavapai.....	5,219	6	72.3	98	9†	47	4	50	2.15	0	1.05	0	9	6	22	3	Agent Southern Pacific Co.	
Sentinel.....	Maricopa.....	685	12	80.8	- 5.0	114	14	66	23†	39	3.54	+ 2.86	2.53	0	7	16	13	2	Lib. A., T. & S. F. R. R. Co.
Silverbell.....	Pima.....	2,650	6	83.4	106	31	60	1†	29	3.64	0	2.25	0	6	7	16	8	Agent Southern Pacific Co.	
Snowflake.....	Navajo.....	5,644	1	70.0	92	9	52	31	35	5.89	0	1.50	0	13	3	19	9	Imperial Copper Co.	
Springerville.....	Apache.....	6,862	6	64.0	84	8†	45	23	37	3.96	0	0.97	0	14	9	10	12	W. J. Flake.	
Supai.....	Coconino.....	3,200	5	84.4	107	10	62	23	36	0.77	0	0.55	0	4	23	0	8	U. S. Forest Service.	
Tempe.....	Maricopa.....	1,165	7	85.6	109	31	67	2†	39	6.33	0	2.10	0	10	8	21	2	A. H. Symons.	
Thatcher.....	Graham.....	2,800	8	80.0	103	30†	59	31	44	3.40	0	2.00	0	6	8	15	8	F. H. Simmons.	
Tombstone.....	Cochise.....	4,550	17	76.8	+ 1.5	101	30	58	1†	39	2.13	- 0.94	0.68	0	10	5	20	6	Prof. J. H. Larson.
Truxton.....	Mohave.....	3,997	2	80.8	103	15†	62	4	36	0.77	0	0.15	0	10	9	17	5	F. N. Walcott.	
Tuba.....	Coconino.....	4,500	12	74.0	- 3.6	95	9†	50	2	43	1.90	- 0.24	0.52	0	8	12	14	s.	G. A. Dennis.
Tucson.....	Pima.....	2,390	32	83.6	- 3.1	106	15†	49	3	44	1.57	- 0.55	0.52	0	8	0	29	2	H. P. Marble.
Tucson (1).....	do.....	2,380	3	82.0	106	13†	61	28	42	2.16	0	0.72	0	10	5	22	4	University of Arizona.	
Tucson (2).....	do.....	2,526	8	83.5	106	30	64	3	42	1.43	0	0.50	0	15	8	6	17	J. M. Robe.	
Vail.....	Yavapai.....	3,421	12	83.0	- 2.7	104	31	60	26	41	2.59	+ 1.43	0.90	0	4	10	17	w.	U. S. Coast & Geod. Surv.
Walnut Grove.....	Maricopa.....	3,649	21															Agent Southern Pacific Co.	
Wickenburg.....	do.....	2,072	13	85.4	- 0.3	108	12	60	16	42	3.40	+ 2.75	1.20	0	13	6	19	6	J. O. Carter.
Willcox.....	Cochise.....	4,164	29	72.4	- 9.4	100	31	40	10†	58	3.21	+ 1.42	1.45	0	5	16	9	6	Agent S. F. P. & P. Ry.
Williams.....	Coconino.....	6,750	11	63.3	- 4.7	86	9	43	5	39	5.52	+ 2.59	1.30	0	19	6	17	8	Agent Southern Pacific Co.
Winslow.....	Navajo.....	4,853	7															E. J. Nordyke.	
Yuma.....	Yuma.....	141	32	90.2	- 0.7	115	31	69	4	41	0.42	+ 0.30	0.37	0	3	25	4	2	J. F. Bauer.
Yuma.....	do.....	150	4	85.8	112	30	62	4	46	0.44	0	0.36	0	2	17	0	14	sw.	U. S. Weather Bureau.
Caliente.....	Lincoln.....	4,407	1	74.4	104	11†	43	31	49	1.09	0	0.58	0	2	17	8	6	sw.	A. L. Crane.
Logan.....	Clark.....	1,700	4																Salt Lake Route.
																			R. M. Filcher.

*, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for July, 1911. District No. 9, Colorado Valley.*

TABLE 2.—*Daily precipitation for July, 1911. District No. 9—Continued.*

Stations.	Watershed.	Day of month.																														Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Utah—Continued.</i>																																		
St. George.....	Colorado.																																	2.01
San Rafael.....	Green.																																0.03	
Scofield.....	do.				T.				.01																								1.31	
Springdale.....	Colorado.				.10																												1.31	
Sunnyside.....	Green.				.14	.03																										1.30		
Teasdale.....	Colorado.																																0.71	
Thompson's.....	Green.																																0.94	
Tropic.....	Colorado.																																1.73	
Troutcreek Ranger.....	Green.																																1.87	
Vernal.....	do.																																0.28	
Woodside.....	do.																																0.70	
<i>New Mexico.</i>																																	3.50	
Alma.....	Gila.																																	3.50
Aragon.....	do.																																	3.70
Aztec.....	San Juan.																																	4.22
Blackrock.....	L. Colorado.																																	4.01
Bloomfield.....	San Juan.																																	3.80
Cambray.....	Mimbres.																																	5.19
Cliff.....	Gila.																																	7.13
Columbus.....	Mimbres.																																	5.64
Deming.....	T.																																	4.59
Dulce.....	San Juan.																																	4.50
Fort Bayard.....	Mimbres.																																	2.46
Fort Wingate.....	L. Colorado.																																	2.27
Fruitland.....	San Juan.																																	3.23
Gage.....	Mimbres.																																	6.23
Gila Planting Station.....	do.																																	3.63
Hachita.....	Gila.																																	4.74
Haynes.....	do.																																	5.64
Hermanes.....	Gila.																																	5.15
Lordsburg.....	do.																																	2.46
Luna.....	do.																																	2.27
Mimbres.....	Mimbres.																																	2.17
Pinos Altos.....	Gila.																																	3.23
Pratt.....	do.																																	2.76
Putnam.....	San Juan.																																	3.47
Ridgrock.....	Gila.																																	3.00
Rodeo.....	do.																																	3.47
<i>Arizona.</i>																																	2.13	
Allaire Ranch.....	Sonora.																																	2.13
Alpine.....	Gila.																																	0.95
Aztec.....	do.																																	3.80
Benson.....	San Pedro.																																	2.38
Bisbee.....	do.																																	1.27
Bowie.....	Gila.																																	3.73
Buckeye.....	do.																																	2.21
Camille.....	San Pedro.																																	4.71
Casa Granile.....	Gila.																																	1.30
Casa Grande Ruins.....	do.																																	3.23
Cave Creek.....	Verde.																																	6.24
Chin Lee.....	San Juan.																																	3.59
Chlarsons Mill.....	Gila.																																	5.78
Clifton.....	do.																																	4.19
Cline.....	Salt.																																	5.07
Cochise.....	Desert.																																	2.21
Columbia.....	Agua Fria.																																	3.76
Courtland.....	White.																																	3.38
Dos Cabezos.....	Desert.																																	4.53
Douglas.....	Sonora.																																	2.90
Dudleyville.....	Gila.																																	2.19
Fairbank.....	San Pedro.																																	2.50
Flagstaff (1).....	L. Colorado.																																	5.53
Flagstaff (2).....	do.																																	

TABLE 2.—*Daily precipitation for July, 1911. District No. 9—Continued.*

Stations.	Watershed.	Day of month.																														Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Arizona—Contd.</i>																																		
Phoenix (2).....	Salt.....	2.10	1.96																															5.26
Pinal Ranch.....	Gila.....	.82	1.49	.25		.08		.11																								5.34		
Pinto.....	Little Colorado.....	.49	.08	T.																												2.82		
Prescott.....	Hassayampa.....	.65	.58	.13				T.	T.																							3.76		
Quartzsite.....	Colorado.....	.02	.06																													2.09		
Redrock.....	Santa Cruz.....	.19	T.																												0.73			
Roosevelt.....	Salt.....	1.76	.22																												5.18			
Sacaton.....	Gila.....	1.40	.30																												4.11			
St. Johns.....	Little Colorado.....	.11	.22	.15	.16																										3.32			
St. Michaels.....	do.....	.60	.40	.05	T.	.14	T.																								4.17			
Salome.....	Colorado.....	.11																													1.39			
San Carlos.....	Gila.....	.32	.51																												2.99			
San Simon.....	do.....																																	
Seligman.....	Verde.....	.10																													2.15			
Senfivel.....	Gila.....	.42	.08																												3.54			
Silverbell.....	Santa Cruz.....	2.25	.20																												3.64			
Snowflake.....	Little Colorado.....	.87	.73	.35	T.	.76	T.																								5.89			
Springerville.....	do.....	.14																													3.96			
Supai.....	Colorado.....																														0.77			
Tempe.....	Salt.....	2.02	2.10	.05																											6.33			
Thatcher.....	Gila.....	.45		.35																											3.40			
Tombstone.....	San Pedro.....	T.																													2.13			
Truxton.....	Colorado.....	.01		T.	T.																										0.77			
Tuba.....	Little Colorado.....		T.	.08	T.																										1.90			
Tucson.....	Santa Cruz.....	.52	.18					T.																							1.57			
Tucson (1).....	do.....	.70	.07																												2.16			
Tucson (2).....	do.....	.51	.06																												1.43			
Vall.....	do.....																														2.59			
Walnut Grove.....	Hassayampa.....	.45	.25																												4.61			
Wickenburg.....	do.....	1.25	.60																												3.40			
Willcox.....	Desert.....																														3.21			
Williams.....	Colorado.....	.24	.03	.40	.05	T.	.06	.28																						5.52				
Winslow.....	Little Colorado.....																																	
Yuma.....	Colorado.....	.04																													0.42			
Yuma (1).....	do.....	.08																													0.44			
<i>Nevada.</i>																																		
Caliente.....	Colorado.....																														1.09			
Logan.....	do.....																																	

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures at selected stations for July, 1911. District No. 9, Colorado Valley.

Date.	Wyoming.				Colorado.								Utah.								New Mexico.							
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George.		Bloomfield.		Fort Bayard.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	60	27			73	54	80	63	80	40	71	48	75	45	80	41	82	48	86	72	90	69	88	63	77	57	79	56
2.....	73	30			65	55	81	62	66	48	72	46	77	47	82	43	85	45	92	65	91	54	93	56	70	57	87	58
3.....	77	34			74	55	72	62	71	48	74	50	72	50	80	46	86	42	82	62	76	70	98	52	85	58	84	64
4.....	78	39			77	50	85	57	75	44	77	40	77	41	79	41	90	52	94	65	92	58	104	60	89	57	87	62
5.....	80	44			80	49	91	62	77	35	80	44	81	39	81	47	95	50	98	65	94	61	97	64	93	55	90	55
6.....	78	40			76	51	85	64	72	50	77	44	79	50	83	42	90	57	99	78	93	57	104	67	84	62	82	58
7.....	76	42			72	54	86	64	70	50	76	40	78	45	82	41	89	50	97	74	92	61	99	70	82	57	77	55
8.....	60	35			82	49	91	63	74	45	84	44	78	39	81	43	85	52	101	70	93	61	99	61	93	57	81	59
9.....	69	27			85	50	90	54	80	39	78	31	78	27	80	40	90	38	100	69	96	49	100	59	99	54	82	58
10....	75	30			87	50	96	61	86	40	84	37	83	30	85	43	94	43	100	65	99	50	103	56	96	59	72	56
11....	80	35			82	59	96	65	87	60	85	40	86	33	82	40	96	46	101	70	100	60	99	72	86	61	78	59
12....	80	50			79	58	95	67	76	56	86	42	88	39	85	56	98	49	97	75	99	67	99	73	83	58	84	57
13....	80	42			77	57	80	67	81	46	81	45	86	46	87	46	96	55	95	67	99	66	100	66	86	60	88	59
14....	78	40			78	59	95	63	81	42	83	45	85	37	89	47	96	47	96	72	99	61	101	71	82	65	86	58
15....	79	39			79	54	94	66	80	43	83	46	84	39	83	45	95	57	103	72	101	62	102	69	94	61	89	60
16....	77	41			79	54	92	68	76	45	84	45	76	38	87	54	93	54	101	72	100	63	104	69	94	60	82	59
17....	80	43			75	50	92	64	77	48	81	50	77	39	85	52	94	55	102	73	99	60	98	68	88	57	80	58
18....	81	42			74	53	88	66	75	40	76	48	76	45	83	59	84	58	99	73	98	62	93	69	92	60	85	58
19....	75	40			71	57	81	66	67	53	70	47	75	39	82	50	88	58	88	69	93	65	91	66	73	59	82	61
20....	77	36			76	59	89	62	75	49	87	44	85	39	81	53	94	53	95	68	90	60	92	65	82	58	83	60
21....	80	40			74	57	78	66	70	50	78	52	80	47	79	56	91	54	94	73	89	68	82	65	85	63	83	61
22....	81	39			77	53	72	63	64	52	71	57	65	50	76	57	90	60	92	75	88	67	89	66	88	59	86	55
23....	83	35			80	51	88	60	69	53	67	37	78	40	76	57	93	51	96	70	91	58	91	67	91	57	84	58
24....	81	39			74	51	88	60	70	39	81	37	77	37	79	53	90	47	97	67	89	58	95	64	77	57	76	57
25....	83	37			69	53	78	64	72	48	74	44	75	42	73	55	85	56	90	64	87	57	96	66	89	55	74	54
Mns..	75.8	37.3			76.8	52.6	86.9	62.6	74.7	46.4	78.6	43.8	78.5	40.2	81.3	48.5	91.1	51.3	96.1	69.0	93.6	60.5	96.9	64.6	87.3	57.5	83.0	58.4

Date.	Arizona.																Logan, Nev.									
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		San Carps.		Tucson.		Yuma.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	78	60	58	52	70	58	64	43	103	70	79	66	64	55	72	52	78	65	82	65	88	72	-----	-----	-----	-----
2.....	71	56	72	51	75	59	70	40	105	75	82	68	76	54	70	53	87	63	82	63	101	69	-----	-----	-----	-----
3.....	81	56	70	50	80	56	78	40	108	75	94	72	79	55	74	52	97	62	93	49	105	70	-----	-----	-----	-----
4.....	86	61	74	44	87	45	81	41	112	85	100	69	85	53	81	51	97	65	98	68	110	69	-----	-----	-----	-----
5.....	83	62	76	44	88	48	82	41	113	80	104	72	86	53	83	50	100	73	100	70	110	73	-----	-----	-----	-----
6.....	77	62	80	44	80	46	83	43	111	80	100	76	95	52	82	50	98	71	101	78	107	73	-----	-----	-----	-----
7.....	80	62	76	49	87	52	84	46	110	70	100	74	87	53	83	55	99	62	98	73	106	76	-----	-----	-----	-----
8.....	77	63	78	44	88	52	85	47	107	95	100	73	85	60	81	50	103	75	96	72	106	75	-----	-----	-----	-----
9.....	74	62	84	47	88	55	83	57	100	85	100	78	92	56	85	51	100	67	93	75	93	75	-----	-----	-----	-----
10....	73	61	78	52	87	50	82	56	102	80	92	78	84	58	83	52	94	72	89	70	98	80	-----	-----	-----	-----
11....	79	61	73	53	89	52	81	55	108	80	98	77	82	56	80	59	91	69	90	71	105	72	-----	-----	-----	-----
12....	82	60	73	54	96	59	80	54	104	80	101	78	84	64	79	53	102	69	98	70	103	75	-----	-----	-----	-----
13....	82	63	82	48	90	58	79	60	112	82	107	78	88	56	81	55	106	58	104	74	111	77	-----	-----	-----	-----
14....	82	63	80	53	87	55	83	52	109	82	106	83	88	61	82	55	107	66	102	81	109	84	-----	-----	-----	-----
15....	82	63	79	54	89	57	76	54	118	82	104	83	93	61	80	52	103	66	106	80	114	84	-----	-----	-----	-----
16....	84	64	84	51	85	55	79	57	113	90	104	78	86	60	81	54	107	62	102	71	107	81	-----	-----	-----	-----
17....	76	62	78	52	88	56	77	59	103	85	92	73	85	63	83	54	92	57	91	71	94	77	-----	-----	-----	-----
18....	80	62	74	57	88	60	65	55																		